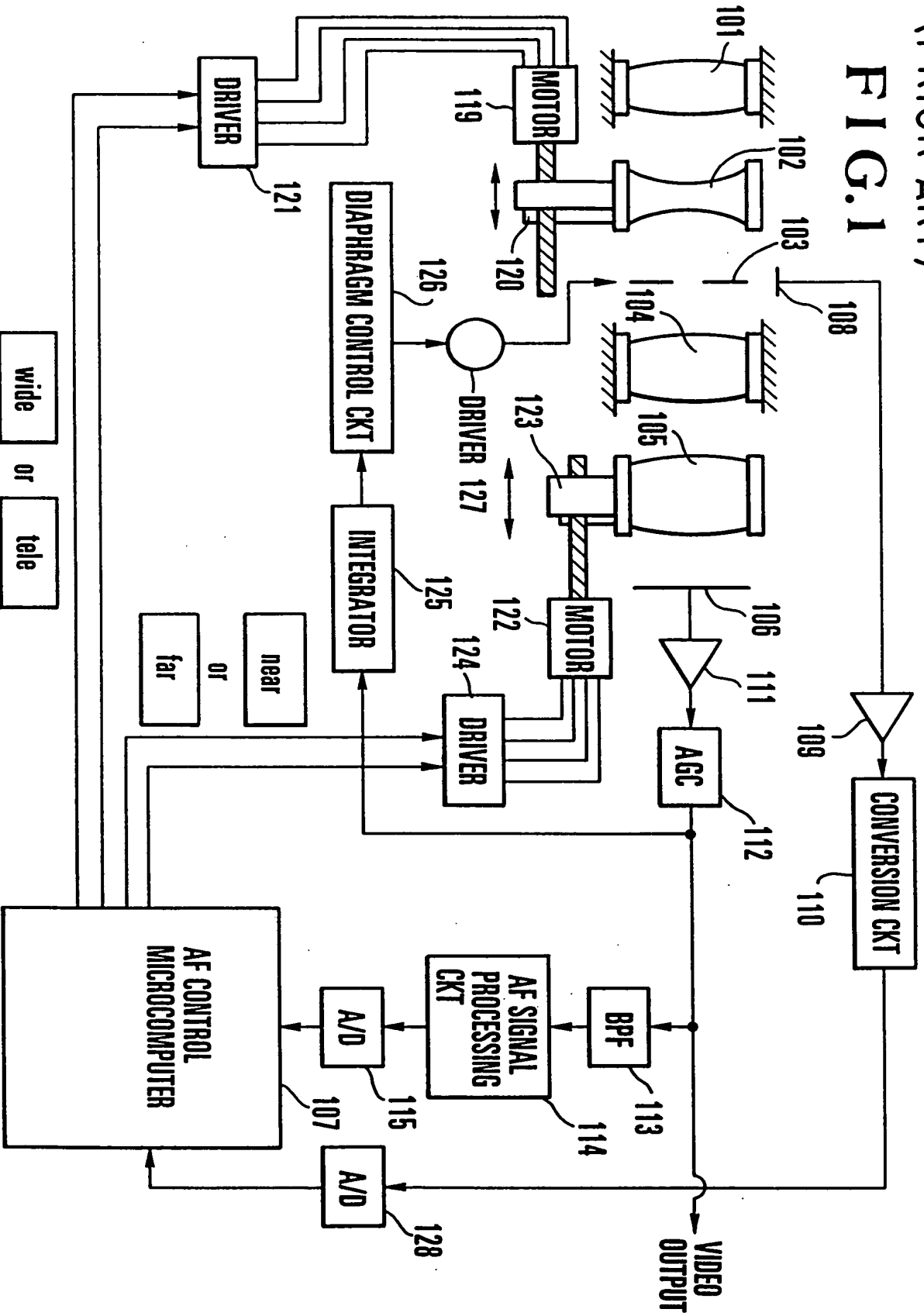


(PRIOR ART)

FIG. 1



(PRIOR ART)
FIG. 2

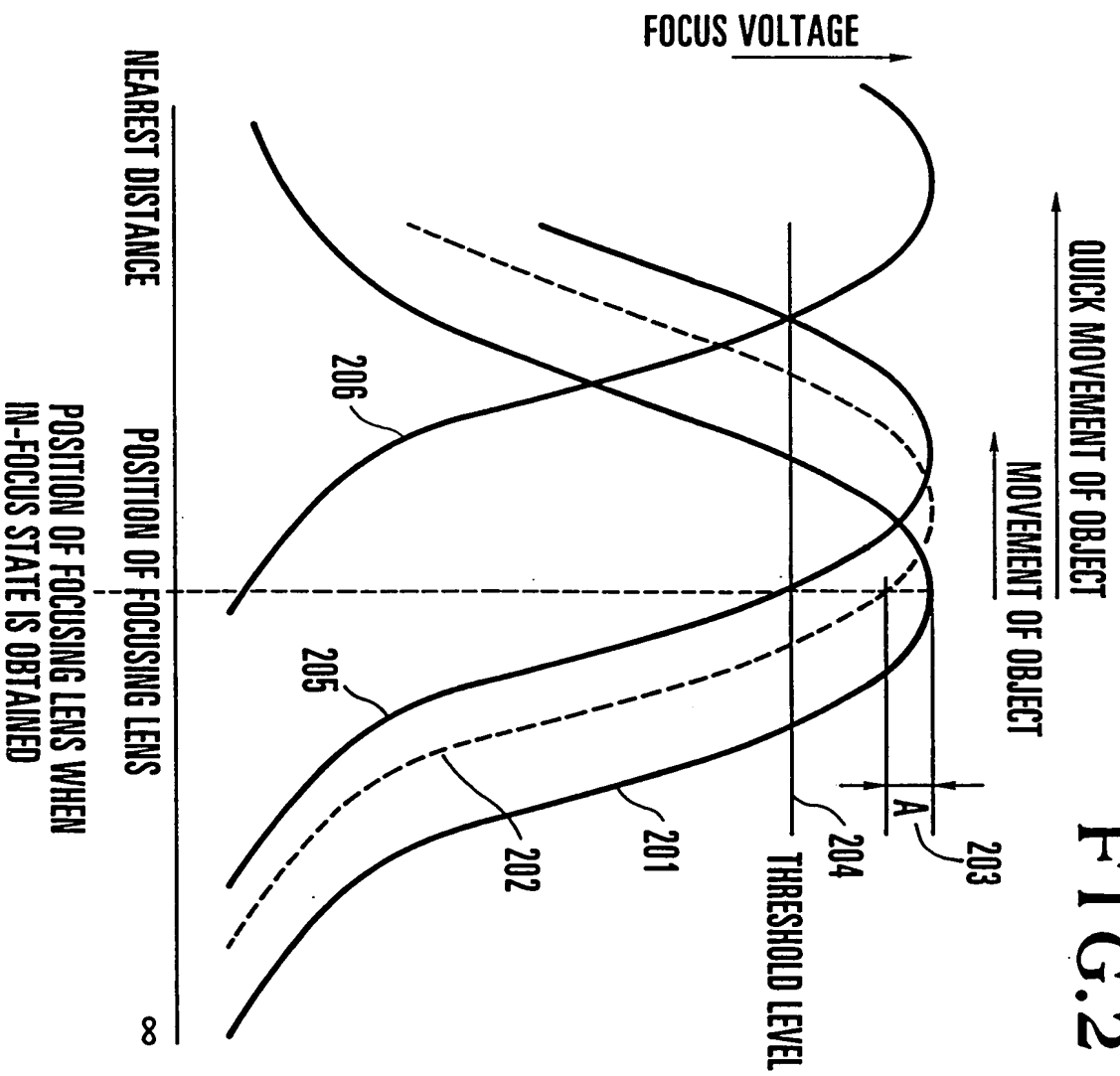


FIG.3 (PRIOR ART)

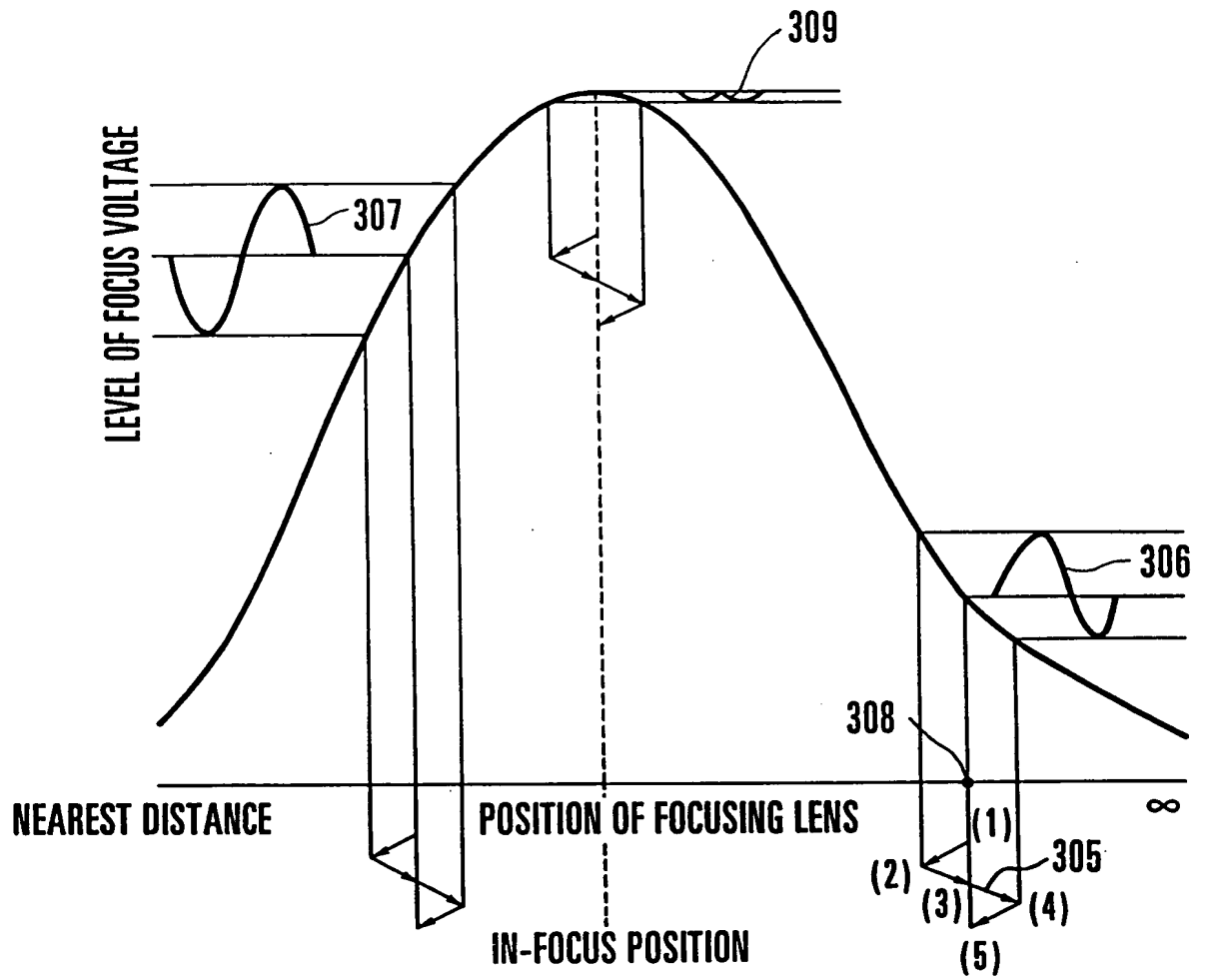
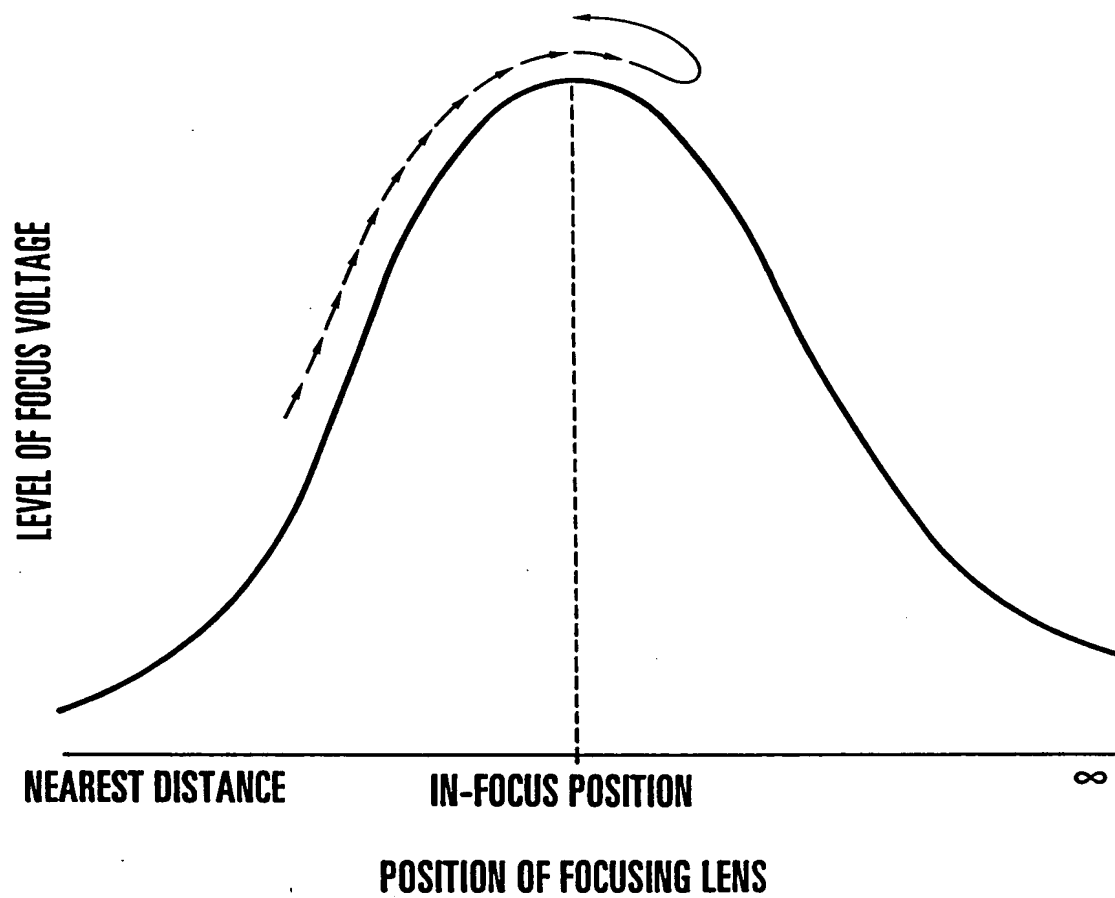


FIG.4 (PRIOR ART)



(PRIOR ART)
FIG. 5

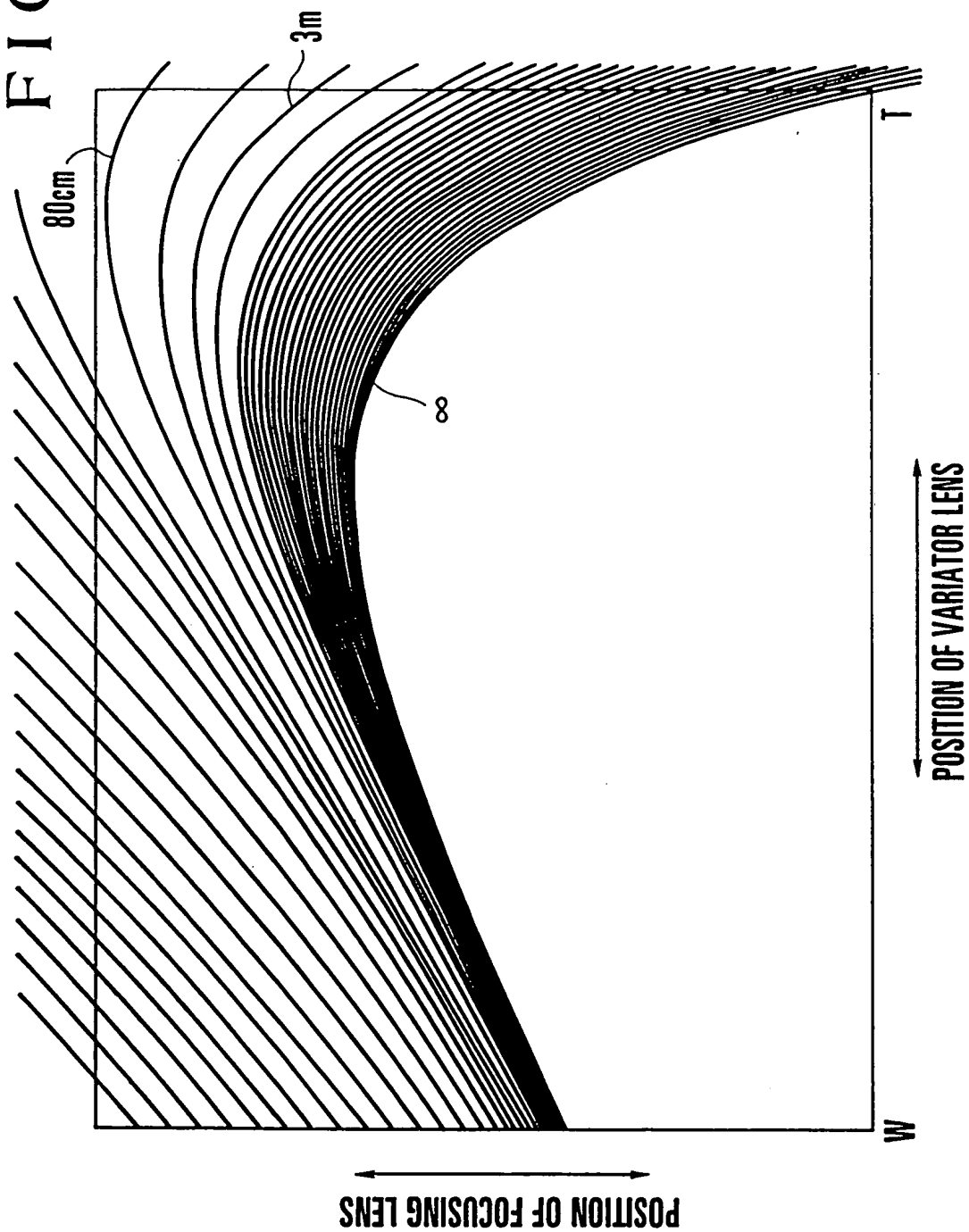


FIG.6 (PRIOR ART)

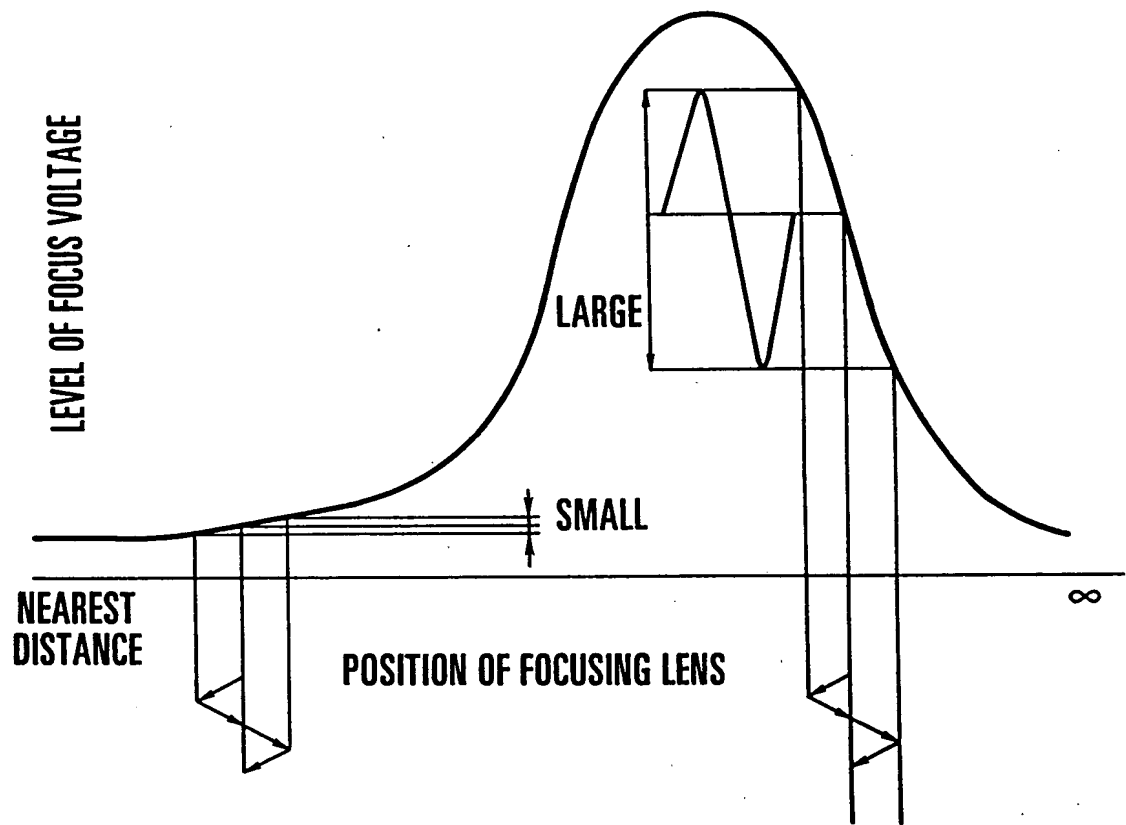


FIG. 7 (PRIOR ART)

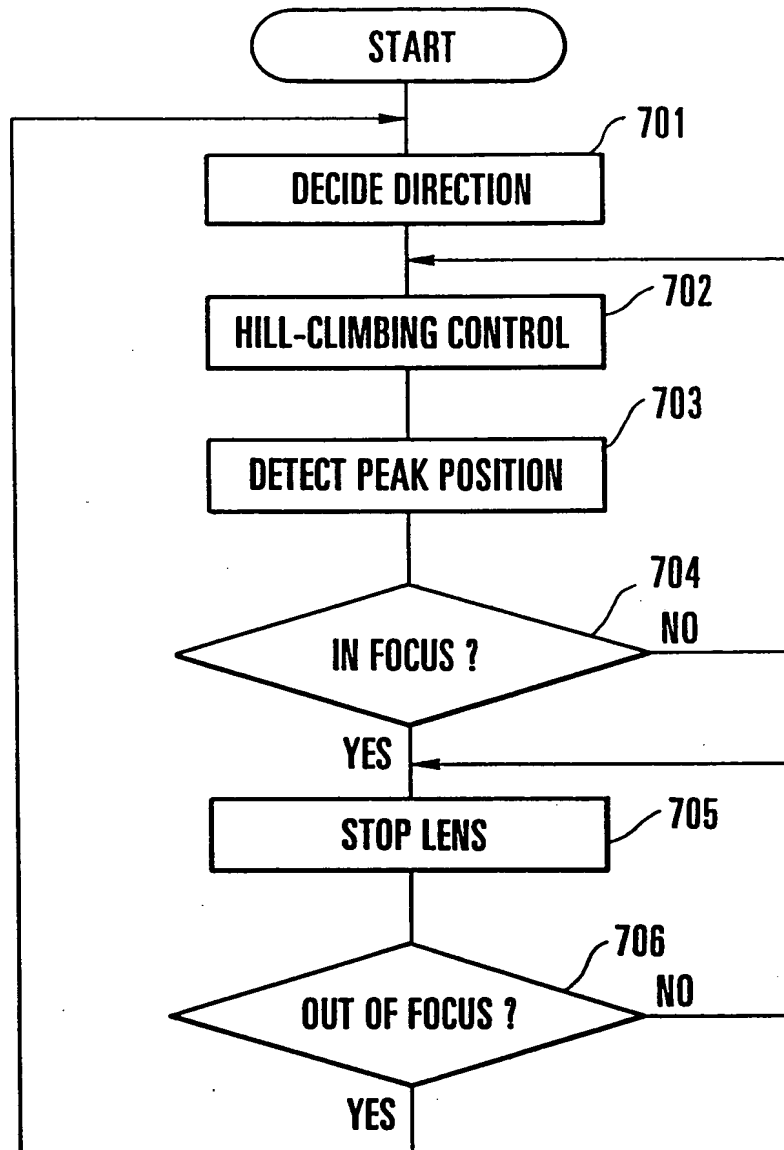


FIG. 8

The diagram illustrates a video camera system with the following components and connections:

- Optical Path:** Light enters from the left through a lens assembly (101, 102, 103) and a diaphragm (104). It passes through a prism (105) and is reflected by a mirror (106) to a sensor (107).
- Control and Processing:**
 - AF CONTROL MICROCOMPUTER (107):** Receives signals from the sensor (107) and controls the AF signal processing (115), A/D converters (803, 128), and the DRIVER (121).
 - AF SIGNAL PROCESSING CKT (115):** Processes autofocus signals.
 - A/D (803, 128):** Converts analog signals to digital for the microcomputer.
 - DRIVER (121):** Controls the MOTOR (119) and the DIAPHRAGM CONTROL CKT (126).
 - DIAPHRAGM CONTROL CKT (126):** Controls the DIAPHRAGM (104) via DRIVER 127.
 - INTEGRATOR (125):** Receives signals from the AF signal processing and the DRIVER (121).
- AGC and Conversion:**
 - AGC (112):** Automatic Gain Control circuit.
 - CONVERSION CKT (110):** Converts the video signal.
 - VIDEO OUTPUT:** The final output of the system.

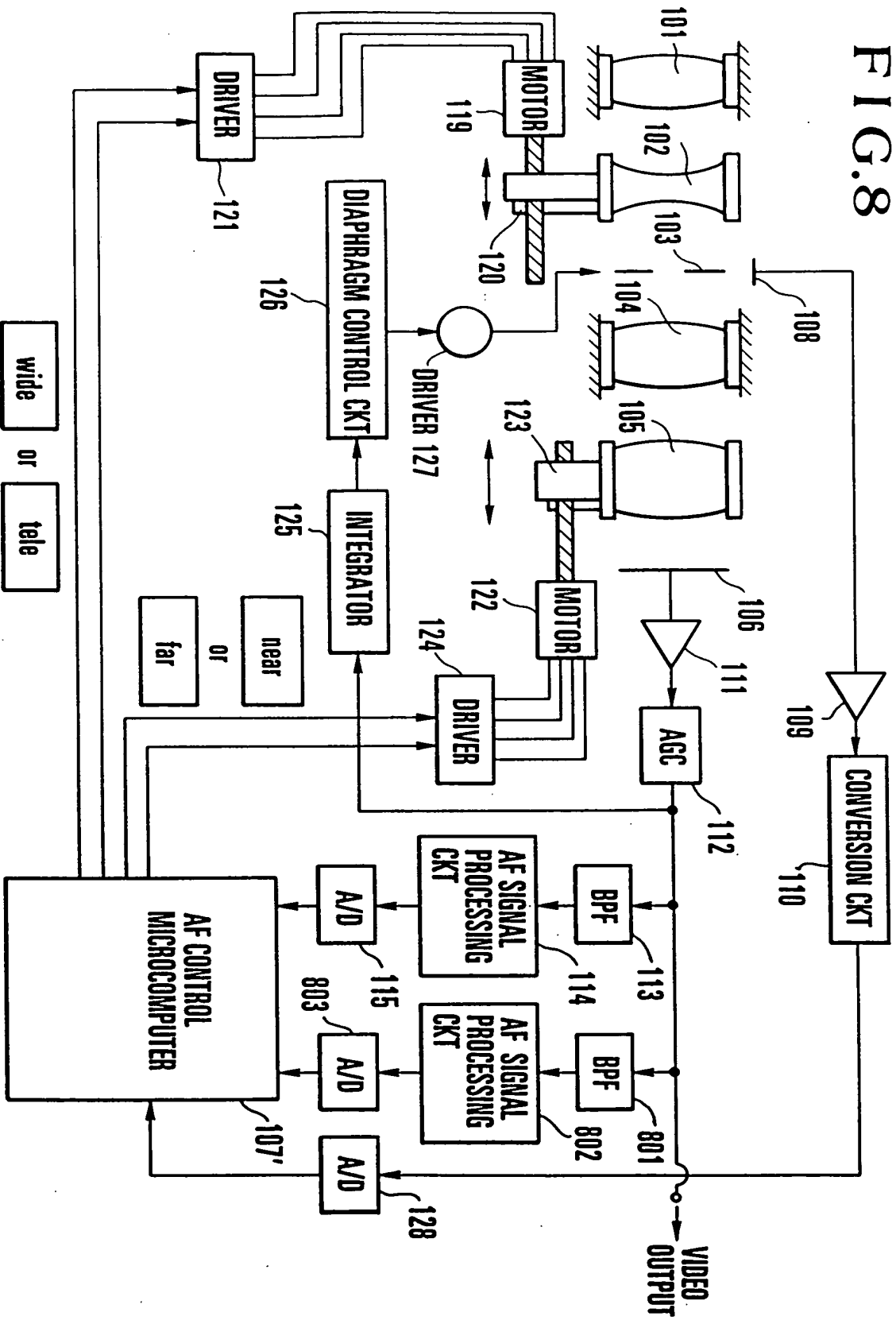


FIG.9

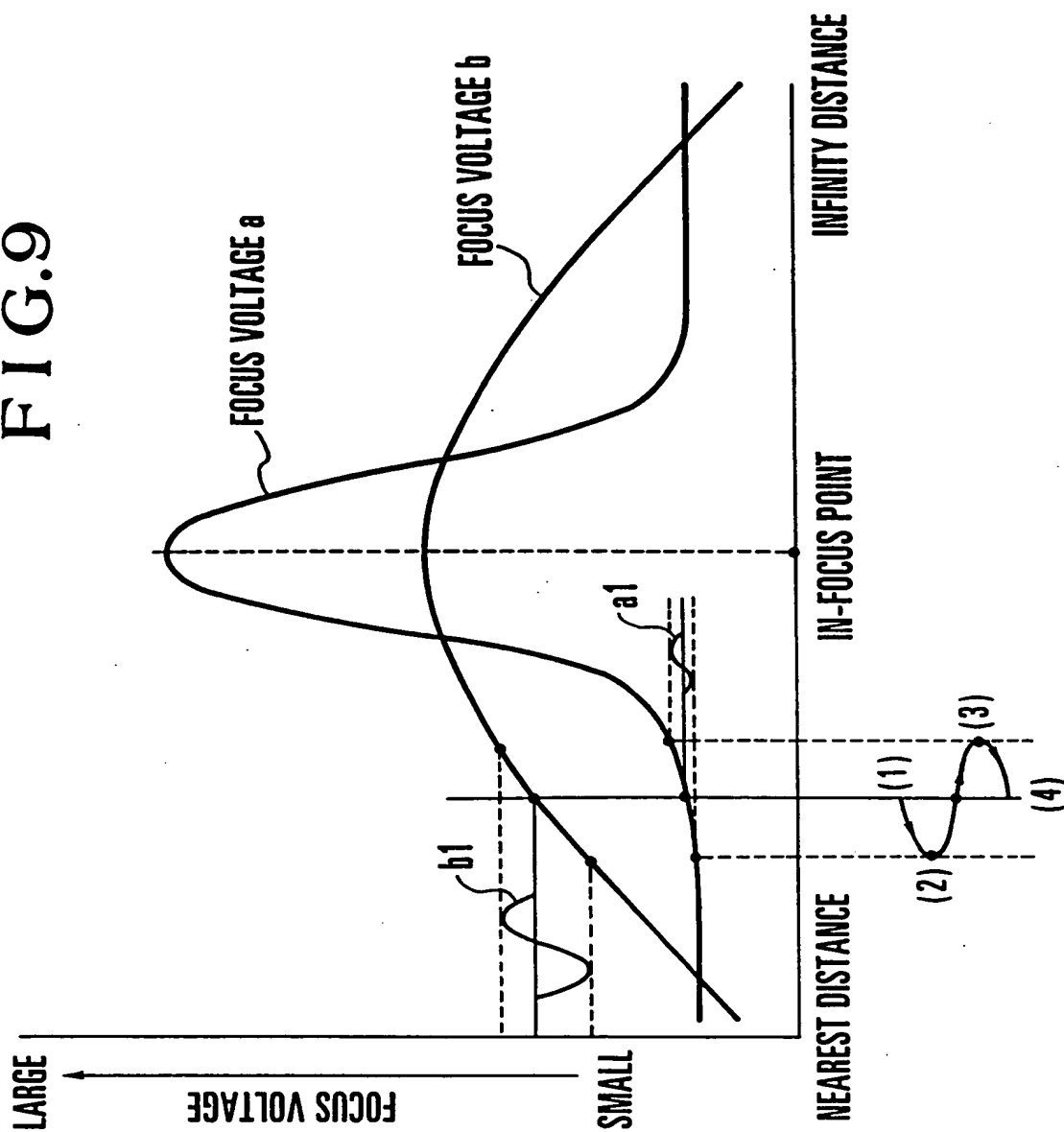


FIG. 10

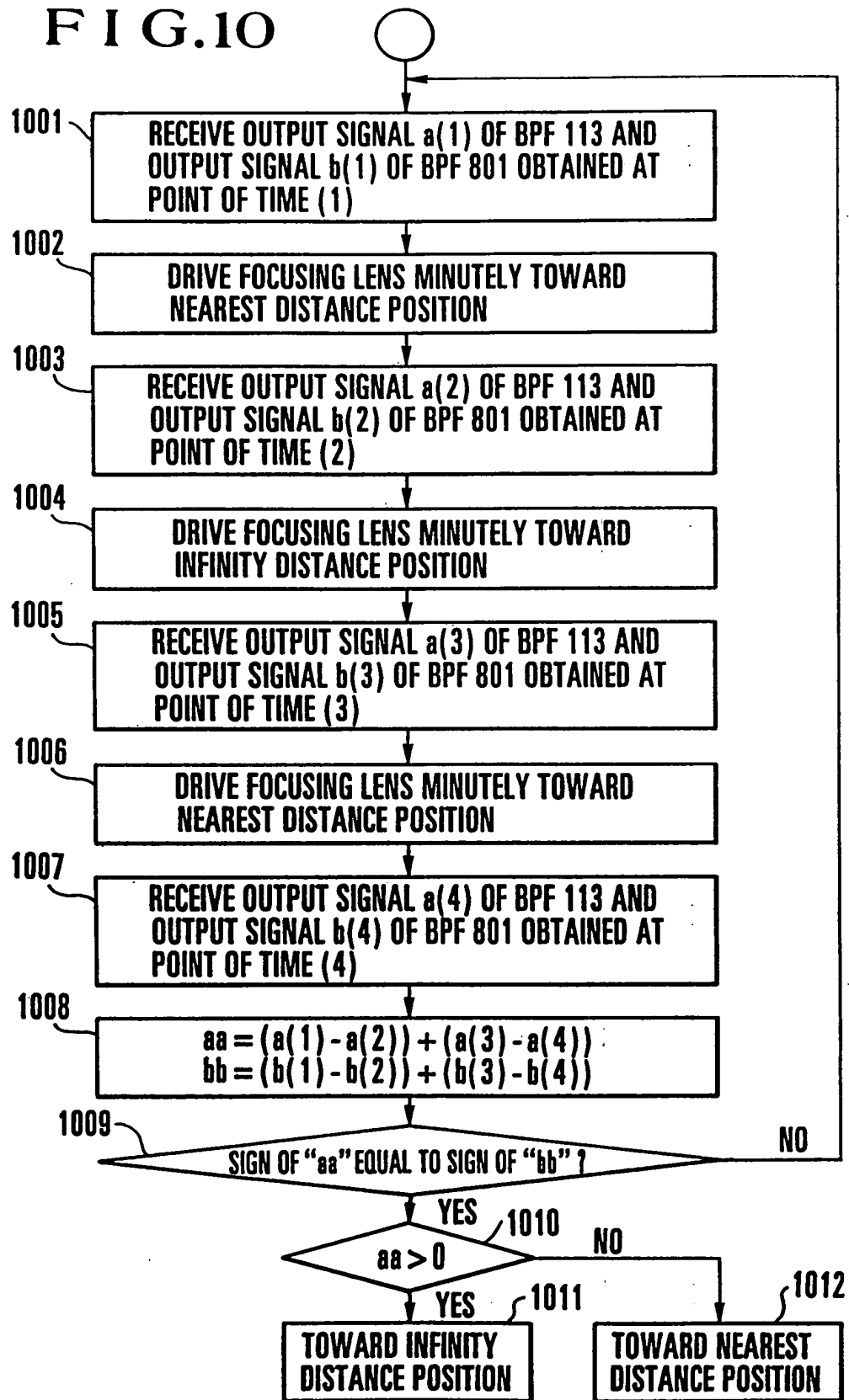


FIG.11

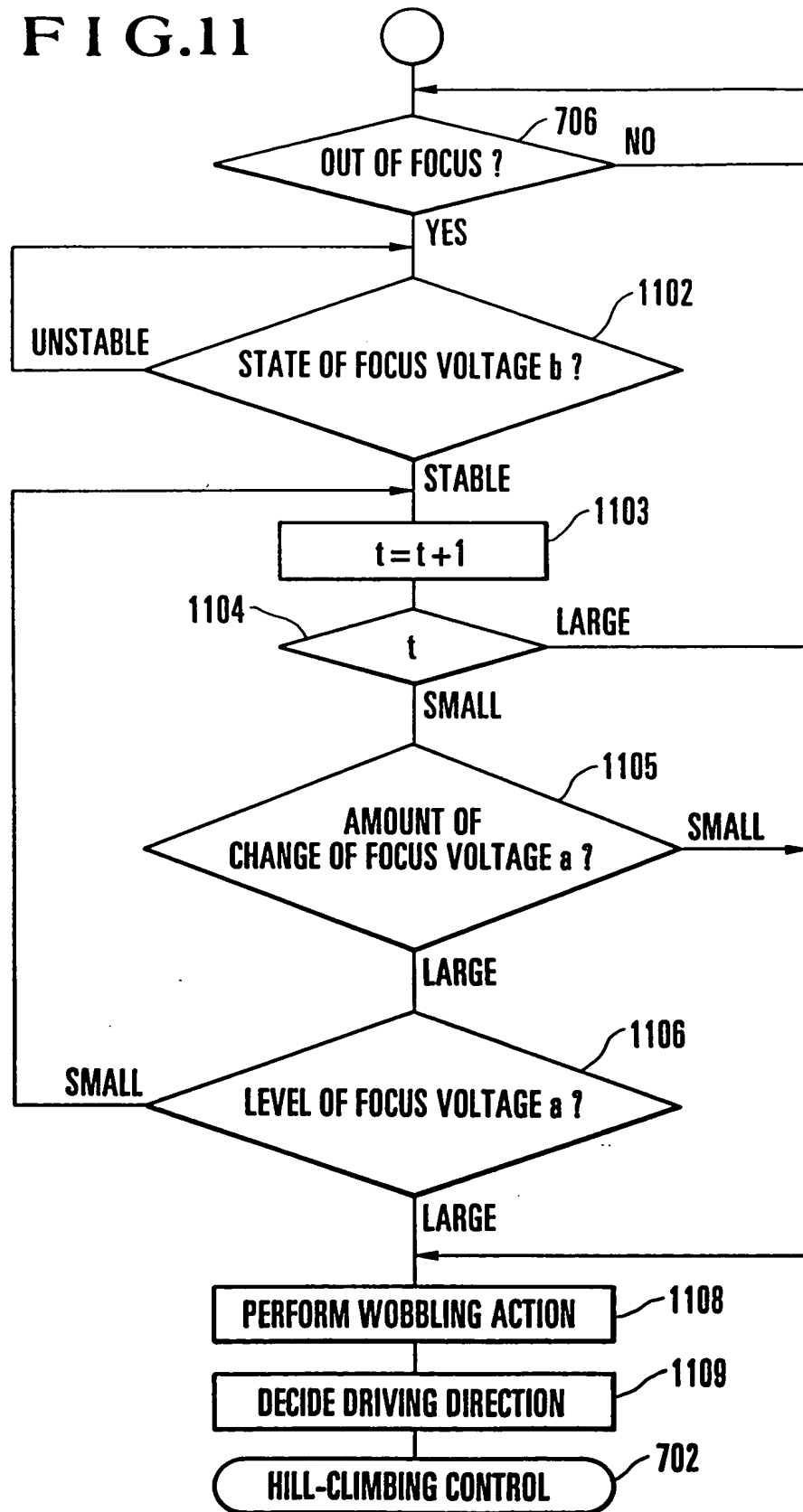


FIG.12

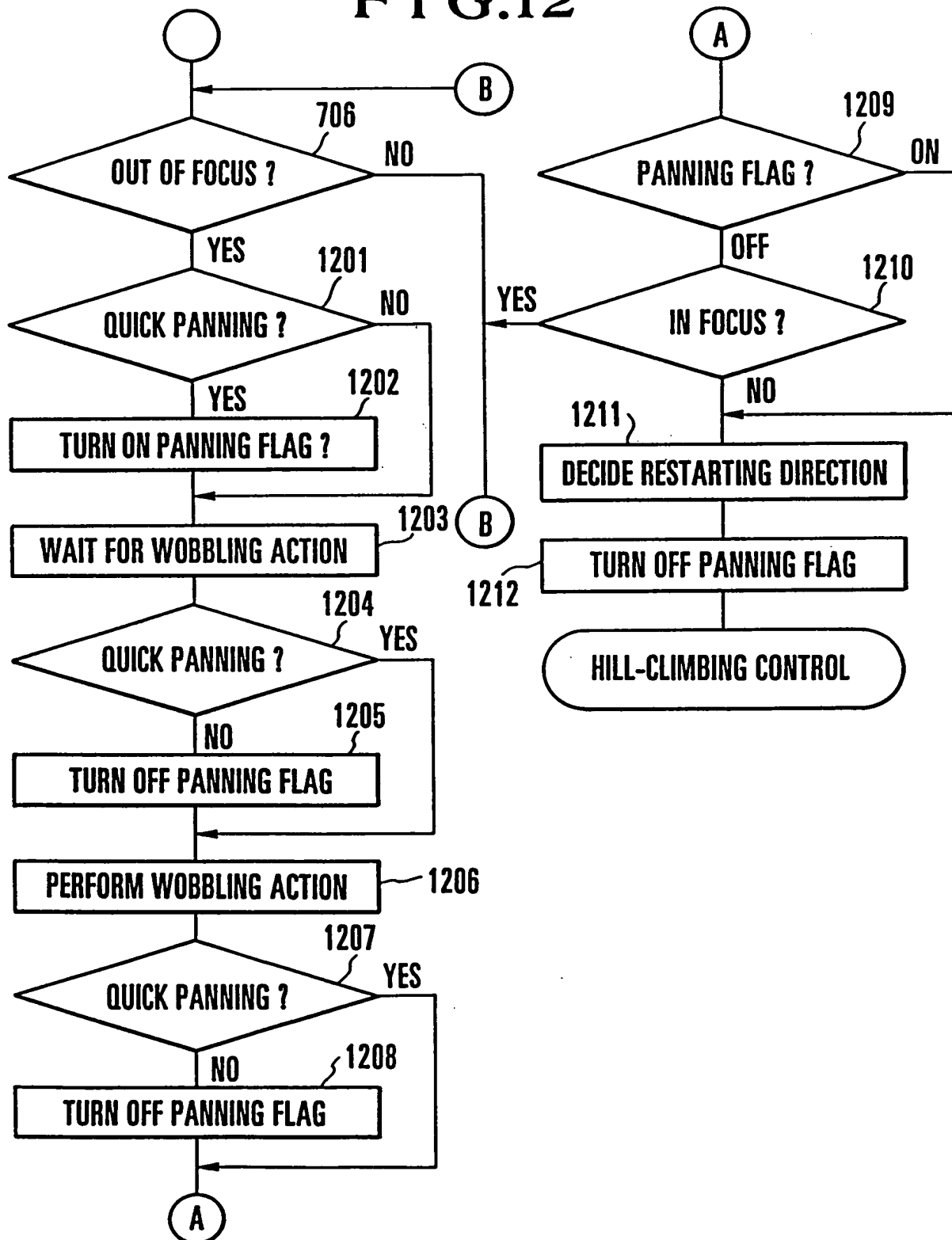


FIG.13

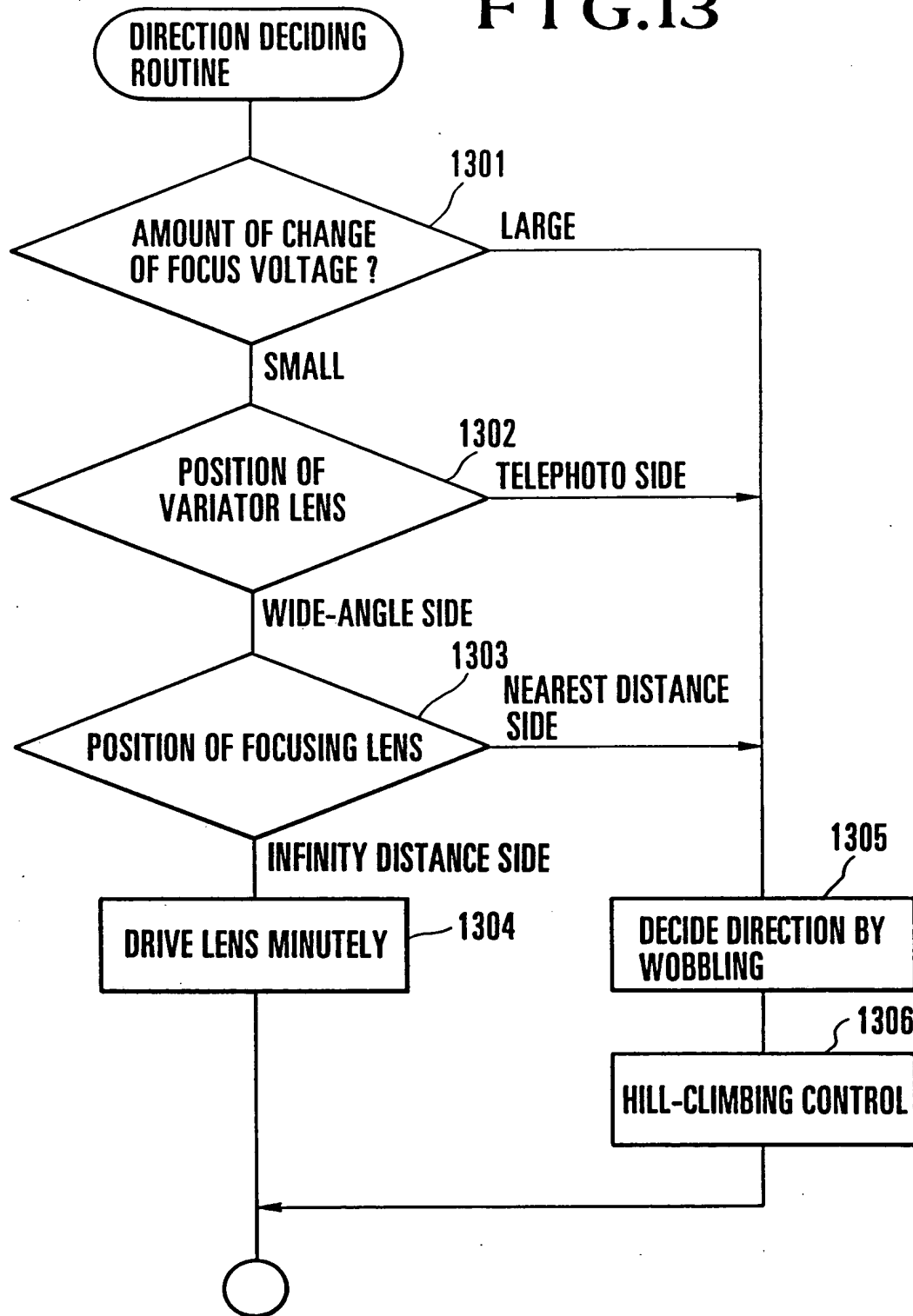


FIG.14

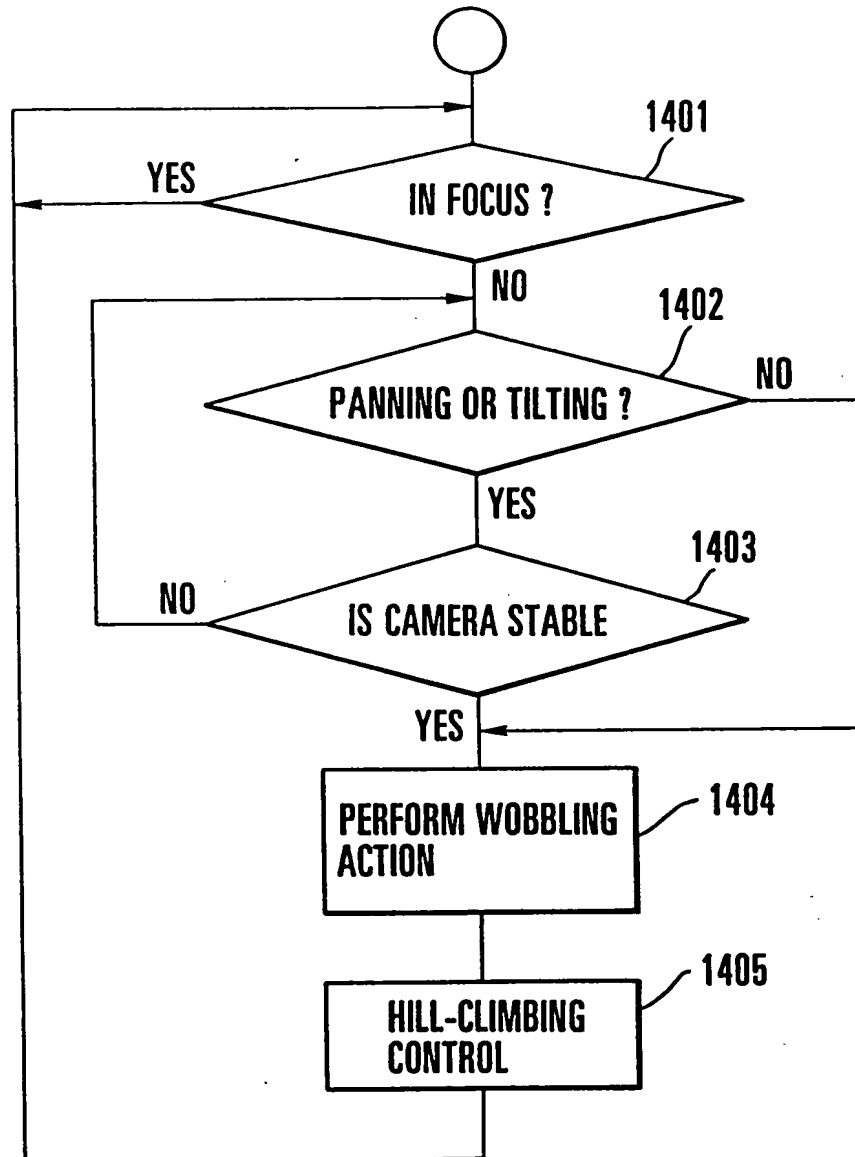


FIG.15

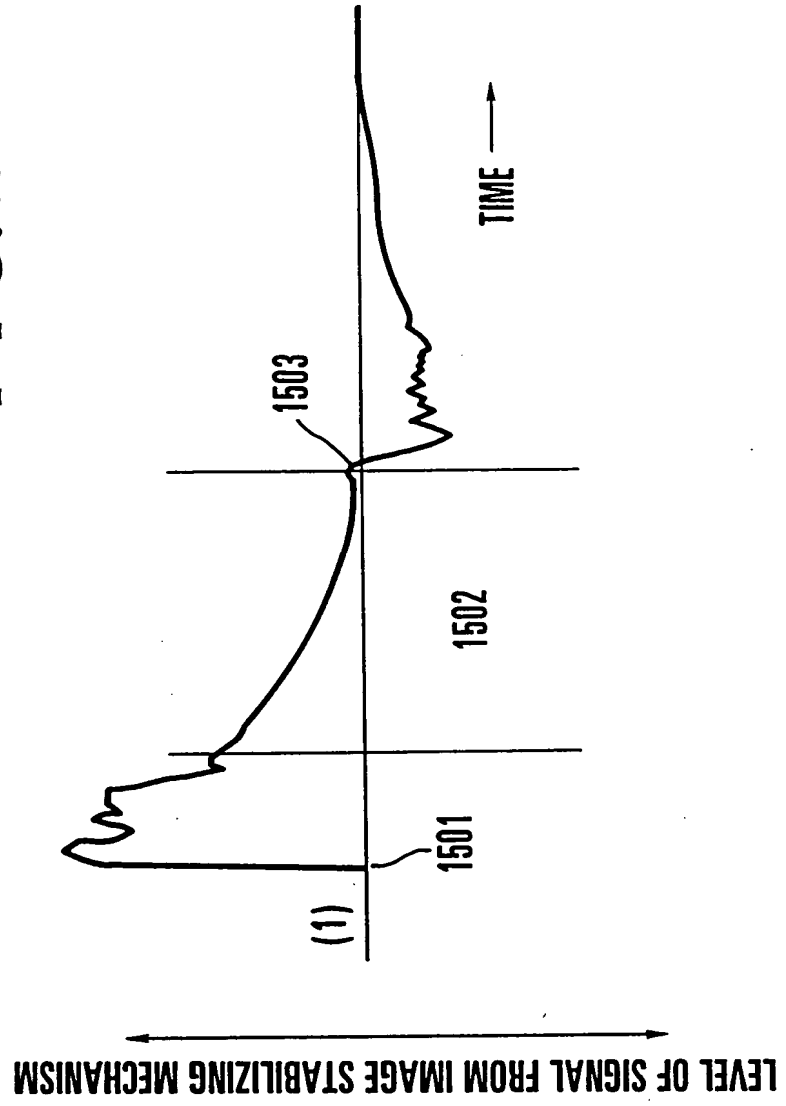


FIG. 16

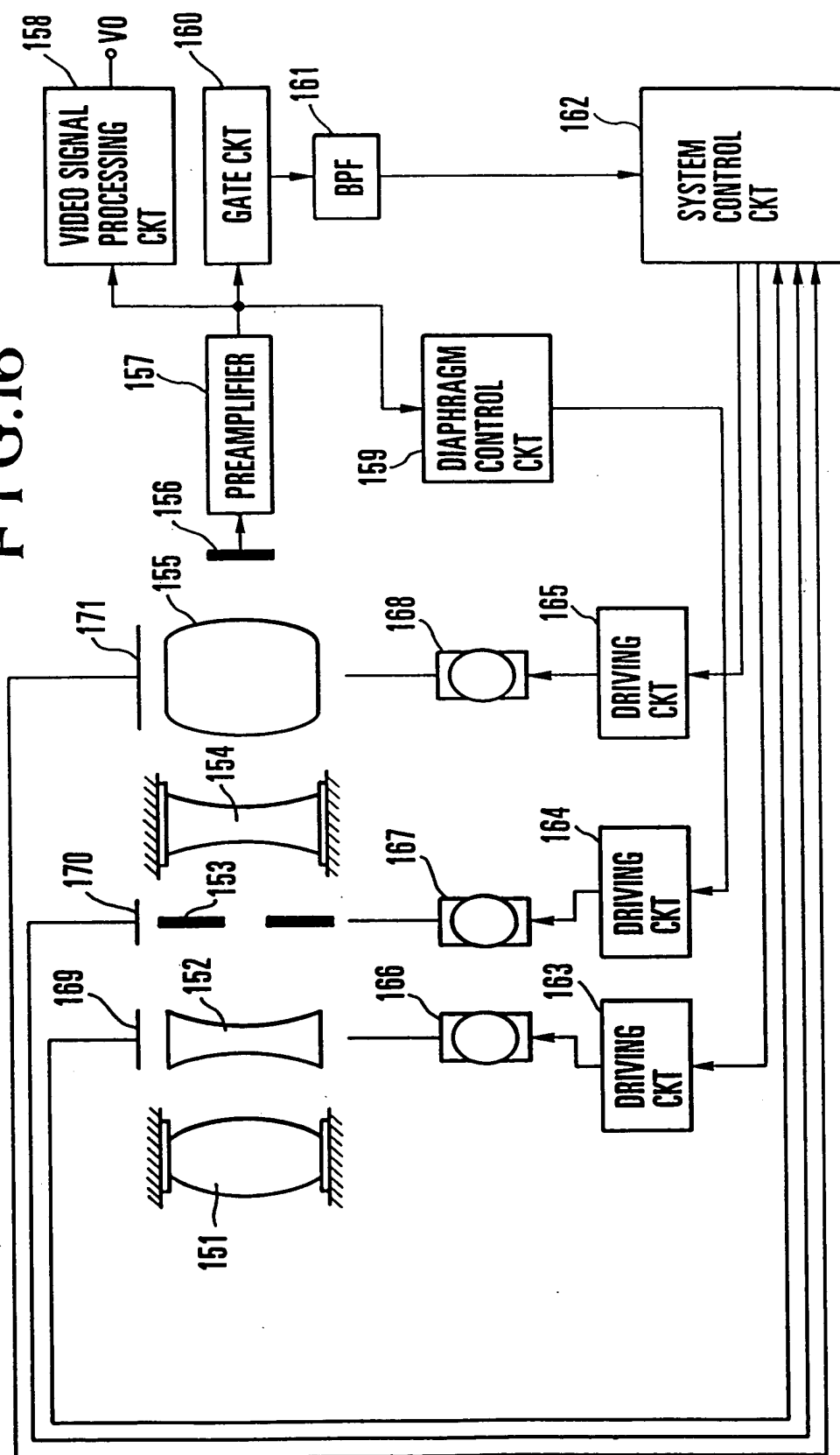


FIG. 17

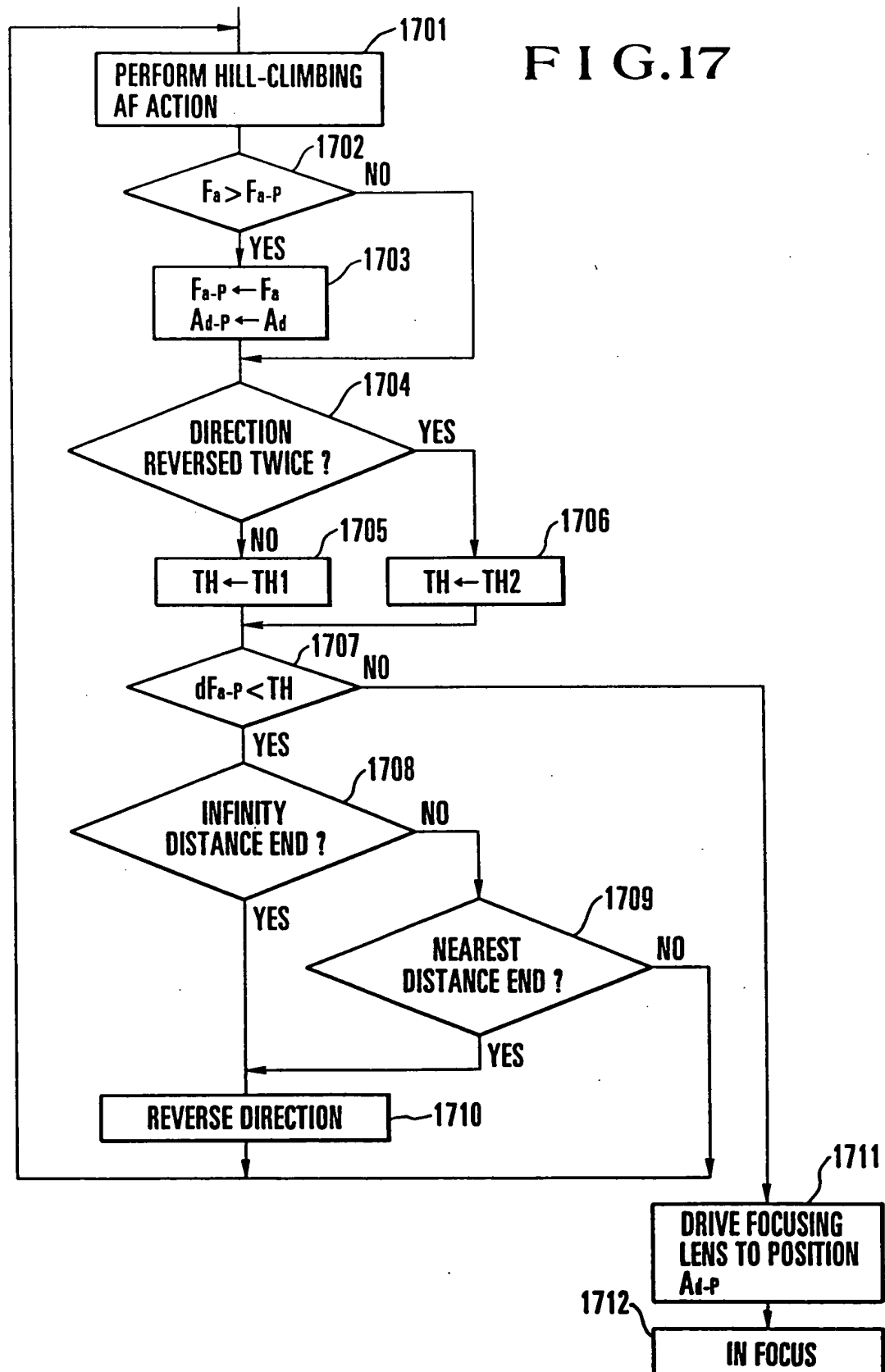


FIG.18(a)

| | | LEVEL OF DEPTH OF FIELD OBTAINED BY FRONT LENS | | | | | | |
|-------------------------|------|------------------------------------------------|------|------|------|-------|---|--|
| FOCAL LENGTH \ APERTURE | 1.4 | | | | | | | |
| | ~2.0 | ~2.8 | ~4.0 | ~5.6 | ~8.0 | ~11.0 | ~ | |
| 80~58mm | 0 | 0 | 1 | 1 | 2 | 2 | 3 | |
| ~40 | 1 | 1 | 2 | 3 | 3 | 3 | 4 | |
| ~28 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | |
| ~20 | 3 | 3 | 4 | 4 | 5 | 5 | 5 | |
| ~14 | 4 | 4 | 5 | 5 | 6 | 6 | 6 | |
| ~ 8 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | |

FIG.18(b)

| LEVEL OF DEPTH OF FIELD OBTAINED BY REAR-FOCUS LENS | | | | | | | |
|-----------------------------------------------------|------|------|------|------|------|-------|---|
| APERTURE | 1.4 | | | | | | |
| | ~2.0 | ~2.8 | ~4.0 | ~5.6 | ~8.0 | ~11.0 | ~ |
| LEVEL OF DEPTH OF FIELD | 1 | 1 | 2 | 2 | 3 | 3 | 4 |

FIG.18(c)

| | | TH2 FOR LEVELS OF DEPTH OF FIELD | | | | | |
|-------------------------|--|----------------------------------|-----|-----|-----|-----|-----|
| LEVEL OF DEPTH OF FIELD | | 1 | 2 | 3 | 4 | 5 | 6 |
| | | | | | | | |
| TH2 (RATIO TO TH1) | | 0.7 | 0.6 | 0.6 | 0.5 | 0.5 | 0.4 |

FIG.19

